IN THE CLAIMS:

The following claims are pending in the application:

1. (Withdrawn) Isolated streptavidin–binding peptide, wherein the peptide comprises the sequential arrangement of at least two different or identical streptavidin–binding or/and streptavidin mutein–binding modules.

2. (Withdrawn) Isolated peptide according to claim 1, wherein each binding module has a binding affinity of at least Kd ≤ 10 mM.

3. (Withdrawn) Isolated peptide according to claim wherein at least one binding module binds competitively with biotin.

4. (Withdrawn) Isolated peptide according to claim 1, wherein the peptide is capable of cooperatively binding to a single streptavidin tetramer or streptavidin dimer.

5. (Withdrawn) Isolated peptide according to claim 1, wherein at least one individual streptavidin–binding module comprises the sequence –His–Pro–.

6. (Withdrawn) Isolated peptide according to claim 1, wherein at least one individual streptavidin–binding module comprises the sequence –His–Pro–Gln–.

7. (Withdrawn) Isolated peptide according to claim 1, wherein the distance between the two individual modules is at least 0 and not greater than 50 amino acids.

8. (Withdrawn) Isolated peptide according to claim 1, wherein each individual module includes at least the sequence –His–Pro–Baa– where Baa is glutamine, asparagine or methionine.

9. (Withdrawn) Isolated peptide according to claim 8, wherein at least one individual module includes at least the sequence –His–Pro–Gln–.

10. (Withdrawn) Isolated peptide according to claim 1, wherein at least one individual module includes at least the sequence –His–Pro–Gln–Phe–.

11. (Withdrawn) Isolated peptide according to claim 1, wherein at least one individual module includes at least the sequence –Oaa–Xaa–His–Pro–Gln–Phe–Yaa–Zaa– where Oaa is

Trp, Lys or Arg, Xaa is any amino acid and where either Yaa and Zaa are both Gly or Yaa is Glu and Zaa is Lys or Arg.

12. (Withdrawn) Isolated peptide according to claim 1, wherein at least one individual module includes at least the sequence –Trp–Xaa–His–Pro–Gln–Phe–Yaa–Zaa– where Xaa is any amino acid and where either Yaa and Zaa are both Gly or Yaa is Glu and Zaa is Lys or Arg.

13. (Withdrawn) Isolated peptide according to claim 1, wherein at least one individual module includes at least the sequence –Trp–Ser–His–Pro–Gln–Phe–Glu–Lys–.

14. (Withdrawn) Isolated peptide according to claim 1, which includes the sequence –Trp–Ser–His–Pro–Gln–Phe–Glu–Lys–$(Xaa)_n$–Trp–Ser–His–Pro–Gln–Phe–Glu–Lys– where Xaa is any amino acid and n is either 8 or 12.

15. (Withdrawn) Isolated peptide according to claim 1, which includes the sequence –Trp–Ser–His–Pro–Gln–Phe–Glu–Lys–$(GlyGlyGlySer)_n$–Trp–Ser–His–Pro–Gln–Phe–Glu–Lys– where n is either 2 or 3.

16. (Previously presented) A fusion protein comprising a streptavidin–binding peptide linked to a protein sequence of interest, wherein the streptavidin–binding peptide comprises a sequential arrangement of two modules, wherein the streptavidin–binding peptide is located at the carboxy terminal end or at the amino terminal end of the protein sequence of interest, wherein each module binds at least one of a streptavidin and a streptavidin mutein, wherein the modules are different or identical and each of the modules comprises an amino acid sequence –His–Pro–Baa– in which Baa is selected from the group consisting of glutamine, asparagine and methionine, and wherein at least one of the modules comprises a sequence –His–Pro–Gln–Phe– (SEQ ID NO:6).

17. (Previously presented) The fusion protein according to claim 16, wherein the protein sequence of interest is selected from the group consisting of a full–length protein, a protein mutant, and a protein fragment.

18. (Withdrawn) Expression vector comprising a nucleic acid sequence which codes for a peptide according to claim 1 and a restriction cleavage site which adjoins said nucleic acid

sequence in 5' or/and 3' direction and which allows the introduction of another nucleic acid sequence coding for a protein to be expressed or a protein part.

19. (Withdrawn) Method for preparing a recombinant fusion protein, wherein a nucleic acid sequence which codes for a fusion protein according to either of claims 16 and 17 is introduced into a suitable host cell or into a cell lysate or into a cell extract.

20. (Withdrawn) Method according to claim 19, wherein the suitable host cell is transfected with a vector which contains a nucleic acid coding for a fusion protein according to either of claims 16 and 17.

21. (Withdrawn) Method for detecting or/and obtaining the fusion protein according to claim 16 or 17 in or from a sample, which comprises contacting the sample with a conjugate of streptavidin or a streptavidin mutein and a label or/and with a conjugate of streptavidin or a streptavidin mutein and a supporting material.

22. (Withdrawn) Method according to claim 21, wherein a fluorescent label or/and an enzyme label, in particular alkaline phosphatase or horseradish peroxidase is used.

23. (Withdrawn) Method according to claim 1 for isolating a protein fused to a peptide according to claim 1 from a sample, which comprises subjecting the sample to a streptavidin or streptavidin mutein affinity chromatography to form a complex between the peptide and streptavidin or/and a streptavidin mutein and eluting the protein by contacting the complex with a streptavidin ligand or/and streptavidin mutein ligand acting as competitor and isolating the protein from the sample.

24. (Withdrawn) Method according to claim 1, wherein the streptavidin ligand used as competitor is an isolated peptide of claim 1, a peptide containing only one streptavidin binding module of the peptide of claim 1, a fusion protein of claims 15, or a peptide or protein comprising one amino acid sequence Trp–X–His–Pro–Gln–Phe–Y–Z where X is any amino acid residue and Y and Z are in each case Gly or where Y is Glu and Z is Arg or Lys.

25. (Withdrawn) Method according to claim 23, wherein the streptavidin ligand used for eluting the fusion protein is biotin or a derivative thereof.

26. (Withdrawn) Method according to claim 23, wherein the streptavidin ligand is 2–iminobiotin, lipoic acid, hydroxyphenylazobenzoic acid, dimethylhydroxyphenylazobenzoic acid, diaminobiotin or/and desthiobiotin.

27. (Withdrawn) Nucleic acid coding for a peptide according to claim 1 or a fusion protein according to claims 16.

28. (Withdrawn) Use of streptavidin or/and a streptavidin mutein as receptor for binding a peptide according to claim 1 or a fusion protein according to claims 16.

29. (Withdrawn) Method for detection of a binding event between a protein and an analyte which is capable of binding to the protein by use of a biosensor, wherein streptavidin or a streptavidin mutein is immobilized on a surface of the biosensor, comprising the steps of

(a) contacting a first sample containing a protein which is linked to a peptide of claim 1 with the biosensor, thereby allowing the formation of a complex between said protein and streptavidin or a streptavidin mutein via the peptide of claim 1,

(b) contacting a second sample which can contain an analyte which is capable of binding to said protein with the biosensor, thereby allowing the formation of a complex between said protein and the analyte,

(c) detecting the binding of the analyte to the protein by use of a signal caused by the formation of the complex between said protein and the analyte.

30. (Withdrawn) Method of claim 29, wherein the analyte is a protein, a protein domain, a peptide, a nucleic acid or an organic molecule.

31. (Withdrawn) Method of claim 29 or 30, wherein the signal caused by the formation of the complex between said protein and the analyte is a surface plasmon resonance signal.

32. (Previously presented) The fusion protein according to claim 16, wherein each module has a binding affinity of at least Kd ≤ 10 mM.

33. (Previously presented) The fusion protein according to claim 16, wherein at least one module binds competitively with biotin.

34. (Previously presented) The fusion protein according to claim 16, wherein the streptavidin–binding peptide binds cooperatively to a single streptavidin tetramer or streptavidin dimer.

35. (Cancelled)

36. (Previously presented) The fusion protein according to claim 16, wherein each module comprises a sequence –His–Pro–Gln–.

37. (Previously presented) The fusion protein according to claims 16, wherein a distance between the at least two modules is between zero amino acids and 50 amino acids, inclusive.

38–40 (Cancelled)

41. (Previously presented) The fusion protein according to claim 16, wherein at least one module comprises a sequence –Oaa–Xaa–His–Pro–Gln–Phe–Yaa–Zaa– (SEQ ID NO:7), where Oaa is Trp, Lys or Arg, Xaa is any amino acid, and wherein either Yaa and Zaa are both Gly, or wherein Yaa is Glu and Zaa is Lys or Arg.

42. (Previously presented) The fusion protein according to claim 16, wherein at least one module comprises a sequence –Trp–Xaa–His–Pro–Gln–Phe–Yaa–Zaa– (SEQ ID NO:8), wherein Xaa is any amino acid, and wherein either Yaa and Zaa are both Gly, or Yaa is Glu and Zaa is Lys or Arg.

43. (Previously presented) The fusion protein according to claim 16, wherein at least one module comprises a sequence –Trp–Ser–His–Pro–Gln–Phe–Glu–Lys– (SEQ ID NO:9).

44. (Previously presented) The fusion protein according to claim 16, which comprises a sequence –Trp–Ser–His–Pro–Gln–Phe–Glu–Lys–(Xaa)n–Trp–Ser–His–Pro–Gln–Phe–Glu–Lys– (SEQ ID NO:3), wherein Xaa is any amino acid, and n is either 8 or 12.

45. (Previously presented) The fusion protein according to claim 16, which comprises a sequence –Trp–Ser–His–Pro–Gln–Phe–Glu–Lys–(GlyGlyGlySer)n–Trp–Ser–His–Pro–Gln–Phe–Glu–Lys– (SEQ ID NO:11), and wherein n is either 2 or 3.

46. (Cancelled)

47. (Previously presented) The fusion protein of claim 17 wherein said streptavidin binding peptide is located at the carboxy terminal of said protein sequence of interest.

48. (Previously presented) The fusion protein of claim 17 wherein said streptavidin binding peptide is located at the amino terminal of said protein sequence of interest.

49. (Previously presented) The fusion protein of claim 16, wherein said sequential arrangement of two modules forms part of a sequential arrangement of 3 modules.

50. (Previously presented) The fusion protein of claim 16, wherein said sequential arrangement of two modules forms part of a sequential arrangement of 4 modules.

51. (Previously presented) The fusion protein of claim 16, wherein said sequential arrangement of two modules forms part of a sequential arrangement of 5 modules.